Check List the journal of biodiversity data

NOTES ON GEOGRAPHIC DISTRIBUTION

Check List 13(3): 2147, 20 June 2017 https://doi.org/10.15560/13.3.2147
ISSN 1809-127X © 2017 Check List and Authors

First record of *Carangoides otrynter* (Jordan & Gillbert, 1883) (Perciformes: Carangidae) in Pacasmayo, northern Peru

Andrea A. Jiménez, Luis A. De Lucio,[1] Amado A. Solano, Luis O. Escudero & Cinthia E. Vasquez

Laboratorio Costero de Huanchaco, Instituto del Mar del Perú (IMARPE), Av. La Ribera 805, Huanchaco,Trujillo, La Libertad, Perú
[1] Corresponding author. E-mail: ldelucio@imarpe.gob.pe

Abstract. The Threadfin Jack (*Carangoides otrynter*) is recorded for the first time in the port of Pacasmayo, northern Peru (07°26′18″ S, 079°35′02″ W), based on specimens caught on 22 January 2016 by artisanal fishers. The biometric characteristics of two specimens are 26 and 21 cm total length and 281.82 and 168.12 g total weight, respectively. The presence of this species in the area could be associated with the entry of a Kelvin wave during the El Niño-Southern Oscillation event.

Key words. Threadfin Jack; biometric; El Niño Oscillation (ENSO); Kelvin wave

Carangoides otrynter (Jordan & Gillbert 1883), commonly known as Threadfin Jack or Pompano in English and pámpano, espejuelo, cojinova or cocinero chicuaca in Spanish, is a species of coastal marine fish that belongs to the family Carangidae. This species was originally described as *Carangoides dorsalis* (Gill, 1863), but subsequently, it was considered to be synonym of *Caranx otrynter* (Smith-Vaniz 1995, Smith et al. 2010).

According to Froese & Pauly (2015), *C. otrynter* is found throughout the tropical regions of the Eastern Pacific Ocean, from southern California, south through Mexico and Central America to Ecuador and the Galapagos Islands. In this contribution, this species is recorded for the first time from northern Peru.

Two specimens were collected from the area known as "El Loro", Pacasmayo province, La Libertad region, northern Peru (07°26′18″ S, 079°35′02″ W, datum WGS84; Fig. 1). This area is characterized by its stony substrate. The specimens were captured by artisanal fishers, on a boat capable of holding 2 tons (roughy 1800 km), using gill nets with mesh size of 3.5 inch (8.9 cm) to 4 fathoms (7.3 m) deep. Both specimens were captured on 22 January 2016, and they represent the first record of the species in Peruvian waters. Later, further specimens (not examined here) were recorded at this and other locations.

The specimens (Fig. 2) were preserved in ethanol (97%), stored in an airtight container and moved to the laboratory of the Instituto del Mar del Peru (IMARPE), in Huanchaco, where the the specimens were identified and studied. The specimens were later sent to the Department of Biodiversity, IMARPE in Lima for deposition in the ichthyological collection (IMARPE 01-016537).

For the identification of the specimens to family we used the taxonomic keys of Chirichigno & Vélez (1998) and Jiménez & Beárez (2004a). To identify the species, we used the *Peces Marinos del Ecuador continental / Marine fishes of continental Ecuador* (Jiménez & Beárez 2004b).

Specimen 1 (Fig. 2A) has a total length (t.l.) of 26 cm, fork length (f.l.) of 21 cm, standard length (s.l.) of 20 cm, and total weight (t.w.) of 281.82 g, while specimen 2 (Figure 2B), presented a t.l. of 23 cm, f.l. of 19 cm, s.l. of 17 cm, and t.w. of 168.12 g. Both specimens were diagnosed by the following combination of characters: body oblong, silvery blue with golden yellow reflections, light stripes, a black spot on the

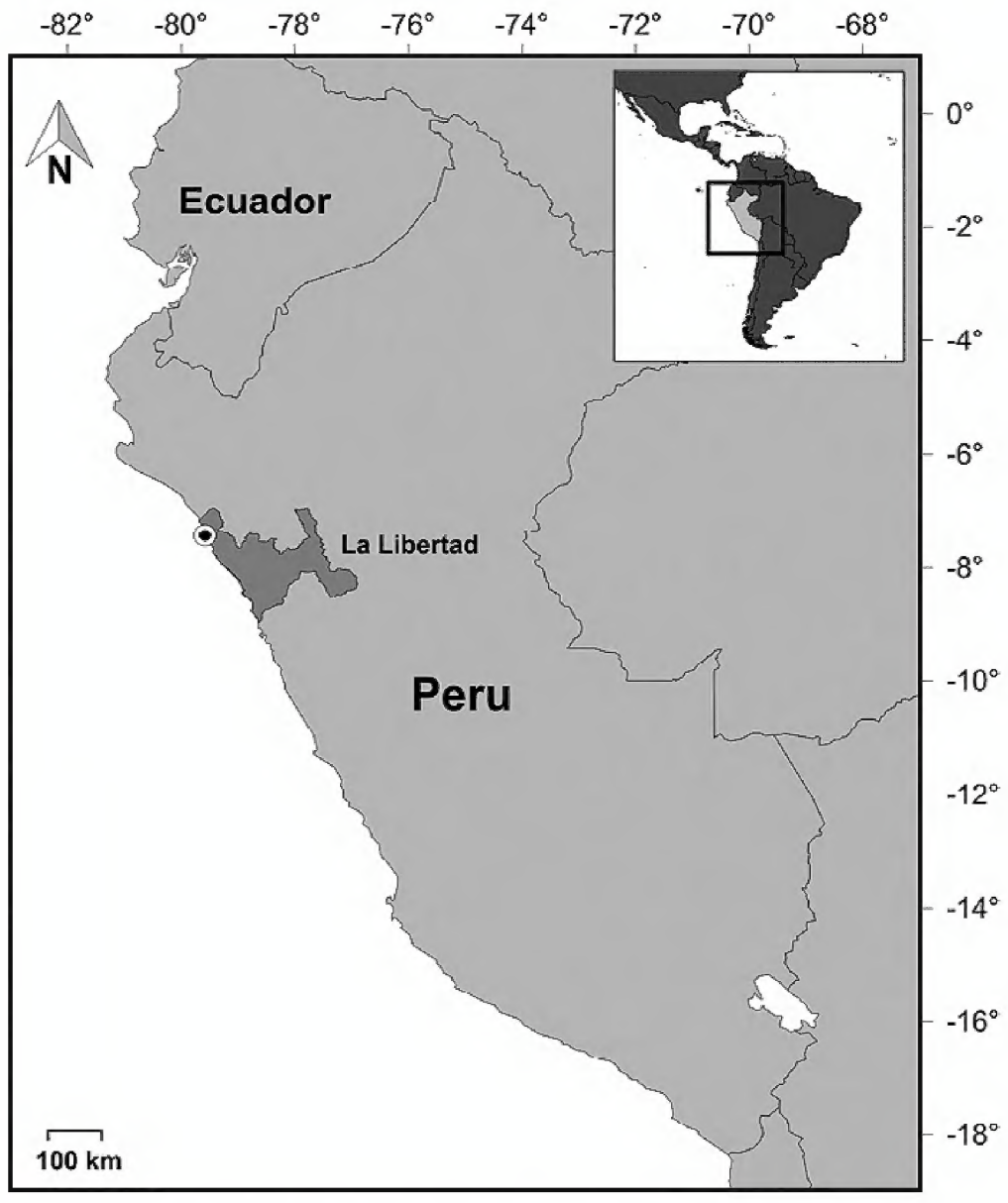

Figure 1. Map of the location where the specimens of *Carangoides otrynter* (black point) were found.

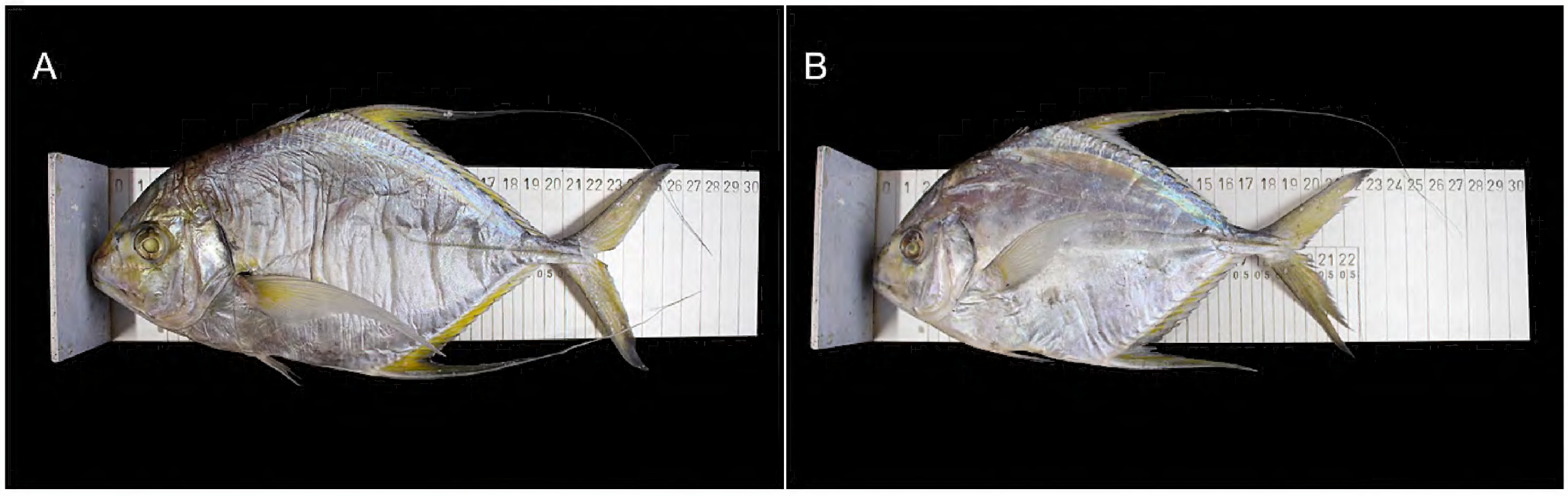

Figure 2. Voucher specimens of *Carangoides otrynter* collected from Pacasmayo, Peru (IMARPE 01-016537). **A.** Specimen of 26 cm. **B.** Specimen of 23 cm. Photos by L.A. De Lucio.

edge of operculum, and black spots in the radius bases; dorsal profile of the mouth slightly oblique; lobes of the second dorsal fin and tail fin very long; pelvic fins thoracic, inserted below of the base of the sickle pectoral fins, with 1 spine and 5 rays; first dorsal fin with four short spines followed by a right margin and 18 rays in the second dorsal fin; tail fin preceded by 2 strong spines and free of the soft portion followed by 15 radios that converge with forked caudal fin; anterior portion of the lateral line curved while the straight portion is composed of 47 shields forming a keel on the caudal peduncle which is thin.

The presence of light stripes on our specimens of *C. otrynter* indicates that they are juveniles (Fisher et al. 1995). These specimens are within the size range (11–67 cm) and weight (31.54–3250 g) described for specimens from other latitudes (López & Arcila 2002, Rojo et al. 2009). Like many other carangids, this species typically inhabits rocky seabeds (Díaz 2012) in oceanic and coastal waters of the Tropical Eastern Pacific with temperatures of 18.4–32.5 °C (Fisher et al. 1995, Castro et al. 2006, Pérez et al. 2006, Del Moral 2010, Díaz 2012). The surface temperature of the sea where the specimens were found was 20 °C, with sea surface temperature anomalies of +2.92 °C (IMARPE 2016a). This anomalous increase in SST is due to the presence of a moderate El Niño–Southern Oscillation (ENSO) in Peru (Informe ENFEN 2016) and the arrival of the Kelvin wave (IMARPE 2016b) in late January (Fig. 3). This would explain the presence and expanded distribution of *C. otrynter* in northern Peru when these conditions are present.

LITERATURE CITED

Chirichigno, N. & J. Vélez.1998. Clave para identificar los peces marinos del Peru. 2nd edition. Callao: Instituto del Mar del Perú. 386 pp.

Castro, J., A. González, J. Agüero & R. Moncayo. 2006. Ictiofauna marina-costera del Pacífico central mexicano: análisis preliminar de su riqueza y relaciones biogeográficas: pp. 149–165, in: Jiménez, M. & E. Espino (eds.). Los recursos pesqueros y acuícolas de Jalisco, Colima y Michoacán. México: Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación.

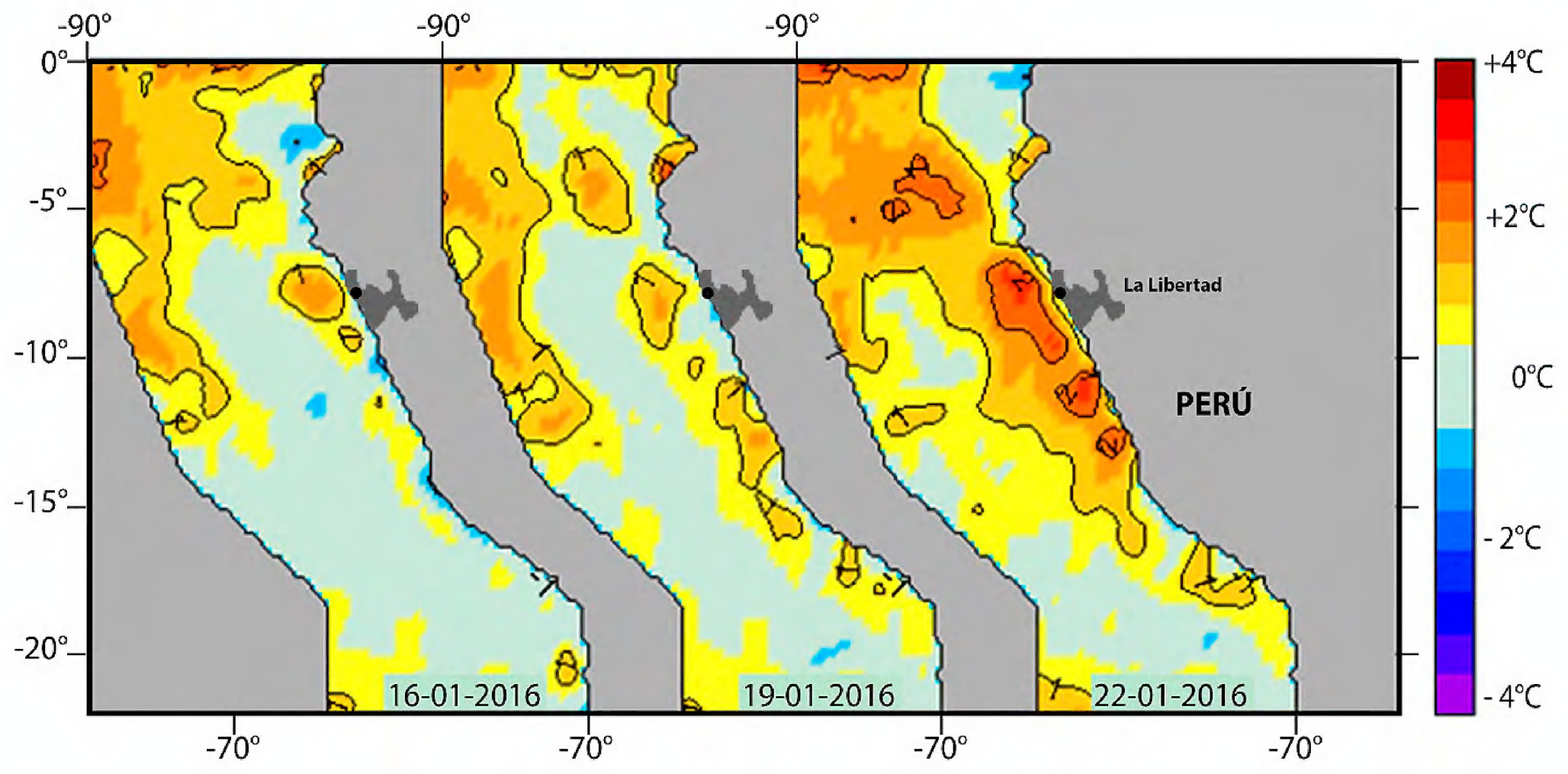

Figure 3. Anomalies of sea surface temperature (°C) in the Peruvian sea, every 3 days, from 16–22 January 2016.

Del Moral, L. 2010. Diversidad y patrones biogeográficos de la ictiofauna asociada a los complejos insulares del Golfo de California [Master's thesis]. La Paz: Instituto Politecnico Nacional. 269 pp.

Díaz, A. 2012. Distribución espacio-temporal del recurso peces en el golfo de Tribugá, Pacífico Colombiano. Bachelor Thesis . Pontificia Universidad Javeriana, Bogota. 41 pp.

Fisher, W., F. Krupp, W. Schaneider, C. Sommer, K. Carpenter & V. Niem. 1995. Guía FAO para la identificación de especies para los fines de la pesca. Pacífico Centro-oriental 2: 647–1200.

Froese, R. & D. Pauly. 2015. FishBase. Version 2015.10. World Wide Web electronic publication. Accessed at http://www.fishbase.org/summary/Caranx-otrynter.html, 25 January 2016.

IMARPE (Instituto del Mar del Perú). 2016a. Boletín semanal de la temperatura superficial del agua de mar en el litoral Peruano N° 4-2016, Periodo: 22–28 Enero 2016, Dirección de Investigaciones Oceanográficas, Unidad de Investigaciones en Oceanografía Física. Lima, Perú. 1 p.

IMARPE (Instituto del Mar del Perú). 2016b. Boletín Diario Oceanográfico 3(23): 4.

Informe ENFEN. 2016. Comunicado Oficial ENFEN N° 2, 2016, Comité Multisectorial encargado del estudio Nacional del Fenómeno El Niño. Lima, Perú. 3 pp.

Jiménez, P. & P. Beárez. 2004a. Peces marinos del Ecuador continental I /Marine fishes of continental Ecuador I. Quito: SIMBIOE. 131 pp.

Jiménez, P. & P. Beárez. 2004b. Peces Marinos del Ecuador continental II/ Marine fishes of continental Ecuador II. Quito: SIMBIOE. 406 pp.

Pérez, R., S. López, L. Flores & R. Salazar. 2006. Composición de la fauna incidental en las capturas de la pesca de la langosta *Panulirus* sp. en el sureste del golfo de California. Revista de Investigaciones Marinas 27: 209–218.

Smith-Vaniz, B. 1995. Carangidae; pp. 940–986, in: W. Fischer, F. Krupp, W. Schneider, C. Sommer, K. E. Carpenter & V. H. Niem (eds.). Guía FAO para la identificación para los fines de la pesca. Pacifico centro-oriental. Vol. 2. Vertebrados. Rome: FAO.

Smith-Vaniz, B., R. Robertson, A. Dominici-Arosemena, W. Bussing & H. Molina. 2010. *Carangoides otrynter*. The IUCN Red List of threatened species. Version 2015.4. https://doi.org/10.2305/iucn.uk.2010-3.rlts.t183808a8180545.en

Authors' contributions. AAJ, LADL, AAS, and LOE wrote the text and made the analysis; CEV collected the specimens.

Received: 18 February 2016
Accepted: 4 March 2017
Academic editor: Arturo Angulo Sibaja